Washington State Department of Health

ELABORATIONS

News and Issues for Washington's Clinical Laboratories

Volume VI Issue 1 January/February 2001

Laboratory Personnel Shortage

At the 7th Annual Clinical Laboratory Conference held in Seattle on November 13, Dana Duzan, Clinical Laboratory Advisory Council representative to the Personnel Shortage Workgroup presented a summary of its activities. These will not be discussed here since they were presented in a series of articles in E**LAB**ORATIONS (See issues: June 2000, July/August 2000, October/November 2000). Mary Briden, Director of University and College Relations for the Maricopa County Community College District in Phoenix, Arizona gave her perspective of the personnel shortage problem in a session entitled "The Laboratory Staffing Shortage: The Best of Times, The Worst of Times". The following are excerpts from her presentation.

The health care personnel shortage crisis is similar to the teacher shortage. However, people are responding to the education crisis for their children, but there is no outcry of support for the health care industry.

The "best of times" refers to the fact that a crisis promotes new ideas, new ways of thinking, and new directions.

The Health care Environment after 2001

- Increased political pressure
- More aging people with chronic illness
- Greater expectations from the system
- Continual push to keep costs down
- Capitation vs. per diems

Inside This Issue

- Shorter lengths of stay in acute care
- Free standing ICUs and surgery units
- Dropping bed capacity
- Shift to outpatient, home health, extended care facilities
- Survival by contracts, not revenue
- More managed care than ever

The potential of having sufficient numbers of employees is present because of the increased numbers of students entering college (baby boomers children now entering college). There are enough students, we just have to get them into health care.

Characteristics of New Students:

- Computer literate
- Comfortable with interactive learning and expect it
- Visual and auditory learners
- Demand immediate feedback
- Environment is important (even more important than money)
- "Now" is important
- Interested in job sharing
- Want learning opportunities any time, and any where (need to explore e-learning)
- Want multiple learning choices in schools with the ability to enter and exit without penalty

These wants and needs carry over into their work environment and the expectations they have of employers. We have to redefine the job for these new workers.

The laboratory manager must be an equal player at the table with education in designing the curriculum for the new students. We must influence the education process to produce the types of employees that we need. We must force the issue or it will not happen.

Free agent learning is when people are engaged in self-directed learning that is career specific and develop competencies that promote portability and career success.

continued on page 11

Hepatitis Practice Guidelines

by Stephen Sarewitz, MD

Laboratory evaluation of viral hepatitis is complex. Washington State's Clinical Laboratory Advisory Council, a cooperative effort of the Department of Health and representatives from the clinical laboratory community and professional laboratory associations, is pleased to provide the following algorithms for viral hepatitis testing:

- Acute Hepatitis Testing Guidelines
- Chronic Hepatitis Testing Guidelines
- Pre- and Post-Vaccination Serologic Testing Guidelines for Hepatitis B
- Hepatitis C Testing Guidelines
- Substantial Exposure Testing and Referral Guidelines

The algorithms address:

- The differential diagnosis of acute hepatitis, including viral *versus* non-viral etiologies;
- Evaluation of patients presenting with elevated serum ALT (alanine aminotransferase; formerly known as glutamate pyruvate transaminase [GPT]);
- Evaluation of patients with chronic hepatitis B and hepatitis C;
- Pre- and post-hepatitis B vaccination testing;
- Testing and treatment of persons potentially exposed to hepatitis B or C in blood or other body fluids.

The intent of the guidelines is to help laboratorians answer questions they may get from clinicians on appropriate test ordering. The guidelines will also be useful to clinicians as a review of a typical test-ordering pattern for asymptomatic patients. The guidelines are a compilation of existing data, not original work by the Council. For the format, the Council elected to summarize existing information into simple, easy-to-use flow charts. Once a test has been identified by the Council as a candidate for a guideline, a Council workgroup is formed to develop a proposed guideline. The draft guideline is reviewed by the entire Council, members of the state's laboratory community and appropriate medical professional societies. Comments from the reviewers are evaluated by the Council workgroup and incorporated into the final document. The finalized guideline is disseminated to all clinical laboratories and other interested parties through this newsletter.

These algorithms have been extensively reviewed by clinical and laboratory experts. However, it is important to point out that these algorithms are educational in purpose. They are meant to be used as guidelines only, and are not to be construed as standards of care. The individual clinician is in the best position to determine which tests are most appropriate for a particular patient.

"ELABORATIONS" is a free monthly publication of the Washington State Department of Health (DOH) Public Health Laboratories (PHL) and Office of Laboratory Quality Assurance (LQA).

Secretary, DOH: Mary Selecky
Health Officer: Maxine Hayes, MD, MPH
Acting Director, PHL: John Kobayashi, MD, MPH
Program Manager, LQA: Gail Neuenschwander
Editor: Leonard Kargacin (206) 361-2804
Circulation: Leonard Kargacin (206) 361-2804

Comments, letters to the editor, information for publication, and requests for subscription can be directed to:
"ELABORATIONS"
Washington State Public Health Labs
1610 NE 150th Street
Shoreline, WA 98155

e-mail address: leonard.kargacin@doh.wa.gov

NOTE: Letters to the editor may be published unless specified otherwise by the author.

Website addresses:
DOH home page: http://www.doh.wa.gov
LQA home page:
http://www.doh.wa.gov/hsqa/fsl/LQA_Home.htm

Group B Streptococcal Project Underway

In response to questions raised recently by constituents and legislators, the Washington State Department of Health has begun a project to identify all cases of early-onset group B streptococcal (GBS) disease in newborns during 1999-2000. The project was designed to address two main goals: 1) to identify opportunities for prevention of early-onset GBS, and 2) to validate the use of hospital discharge data for ongoing monitoring of early-onset GBS in Washington. On January 11, letters requesting participation in this project were sent to hospital administrators, laboratory directors, and medical records directors in all Washington State hospitals with obstetrical/newborn services. The project is scheduled to be completed in Summer 2001, followed by a policy discussion to determine whether DOH should take additional action to prevent early-onset GBS disease in newborns. Please address any questions to Dr. James Heffelfinger at (206) 361-2844 or by email at James.Heffelfinger@doh.wa.gov. We look forward to collaborating with your institution on this important project.

Acute Hepatitis Testing Guidelines

Washington State Clinical Laboratory Advisory Council
October, 2000

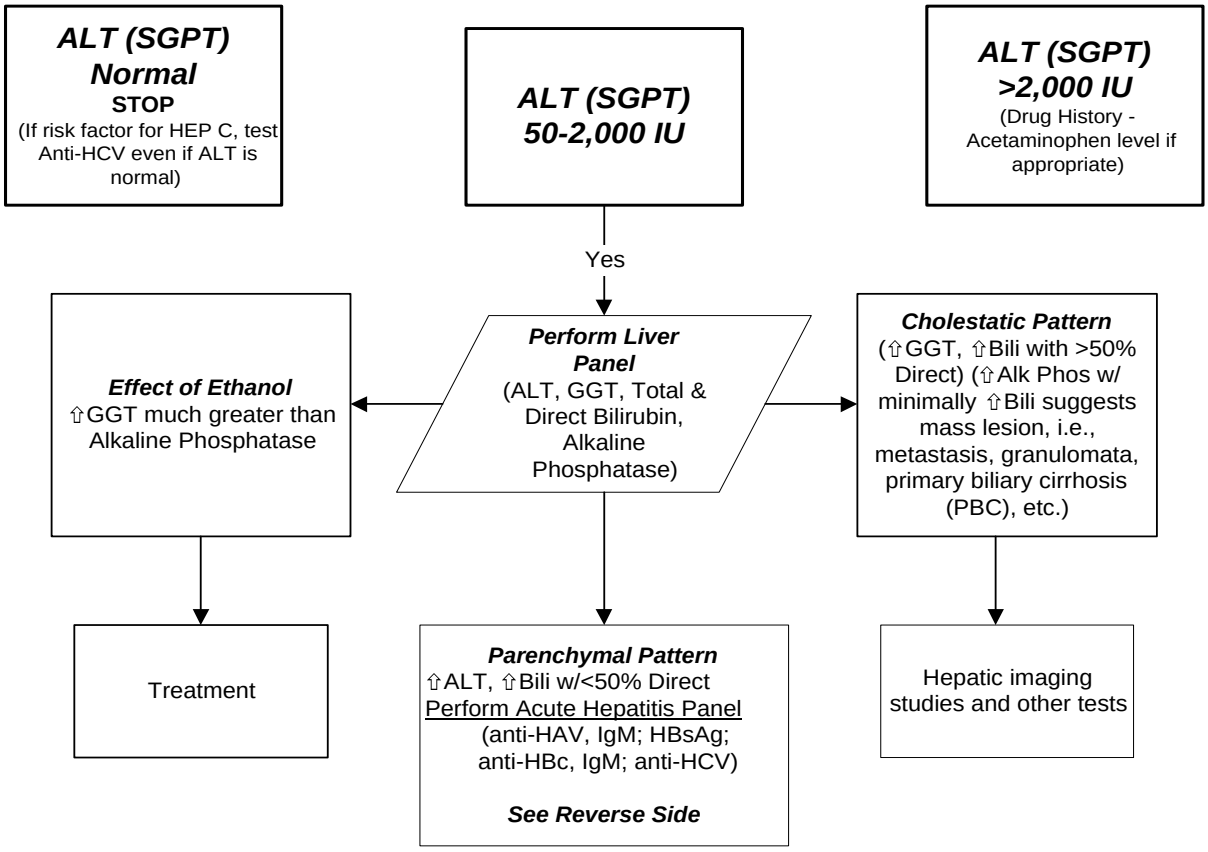
FOR EDUCATIONAL PURPOSES ONLY
The individual clinician is in the best position to determine which tests are most appropriate for a particular patient.

Diagnostic Testing for Hepatitis should be initiated based on a clinical assessment of probability of acute infection including the following criteria:

Symptoms of Hepatitis: Anorexia, nausea, fatigue, malaise, arthralgias, headache, pharyngitis (prodrome), dark urine, clay colored stools

Signs of Hepatitis: Jaundice, low grade fever, large tender liver

Risk factors: Known exposure, IV drug abuse, occupational exposure, unsafe sexual behavior, travel history, history of transfusion



References:

1. **Sjogren MH. Serologic Diagnosis of Viral Hepatitis . Gastroenterology Clinics of North America. 1994;23(3):457-477.**
2. **Herrera JL. Serologic Diagnosis of Viral Hepatitis . Southern Medical Journal. 1994;87(7):677-684.**
3. **Jacobs DS, et al. Laboratory Test Handbook. Third Edtiion. 1994.**
4. **Abbott Laboratories. Abbott Diagnostics Educational Series, Hepatitis Learning Guide. 1998.**
5. **Tietz NW. Clinical Guide To Laboratory Tests . Third Edition. 1995.**
6. **Henry, J. and Bernard, John. Clinical Diagnosis and Management by Laboratory Methods, 19th Edition, 1996, Part 6: 1106-1109.**
7. **Advanced Therapeutics Communications. National Hepatitis Detection, Treatment, and Prevention Program . 1993.**
8. **Adrian MD, DiBisceglie MD. Chronic Hepatitis B . Postgraduate Medicine. July 1995.**
9. **Isselbach et al. Harrison's Principles of Internal Medicine . 13th Edition. 1994. p. 1465-1470.**
10. **Mahoney, Francis J. Update on Diagnosis, Management and Prevention of Hepatitis B Virus Infection. Clinical Microbiology Reviews, Vol 12, No 2, April, 1999 p. 352-366.**

Reviewers:

1. **Gretch D, MD, PhD. Director of Hepatitis Division, University of Washington Viral Hepatitis Laboratory. Personal Communication. 1999.**
2. **Spitters, Christopher, MD, MPH, Medical Director, Infectious Diseases and Reproductive Health, Washington State Department of Health, Personal Communication, June, 1999.**

Acute Hepatitis Panel:
Anti-HAV, IgM; HBsAg; Anti-HBc, IgM; Anti-HCV

Hepatitis A

Anti-HAV, IgM

Positive → *Supportive Therapy*

Negative → **STOP**

Hepatitis B

HBsAg and Anti-HBc, IgM

HBsAg: Neg
Anti-HBc, IgM: Neg
→ *⇧ALT probably not due to HBV*

HBsAg: Neg
Anti-HBc, IgM: Pos
→ *Acute Hep B (Core window)*

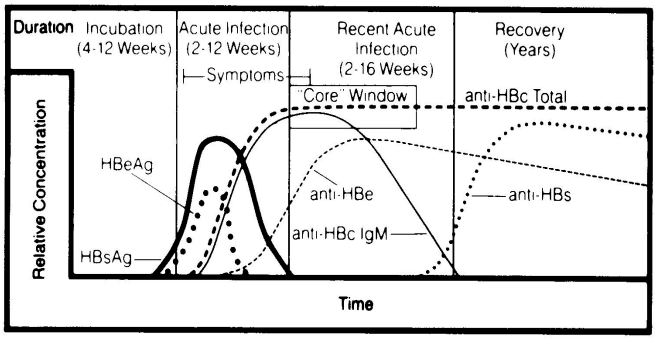
HBsAg: Pos
Anti-HBc, IgM: Pos
→ *Acute Hep B (Reactivation of chronic Hep B)*

HBsAg: Pos
Anti-HBc, IgM: Neg
→ *Go to differential diagnosis*

Hepatitis C

→ See Management of Hepatitis C Guideline

Hepatitis B Serologic Profile



(Serologic profile in 75-85% of patients with Acute Type B Hepatitis)

Anti-HBc, IgG

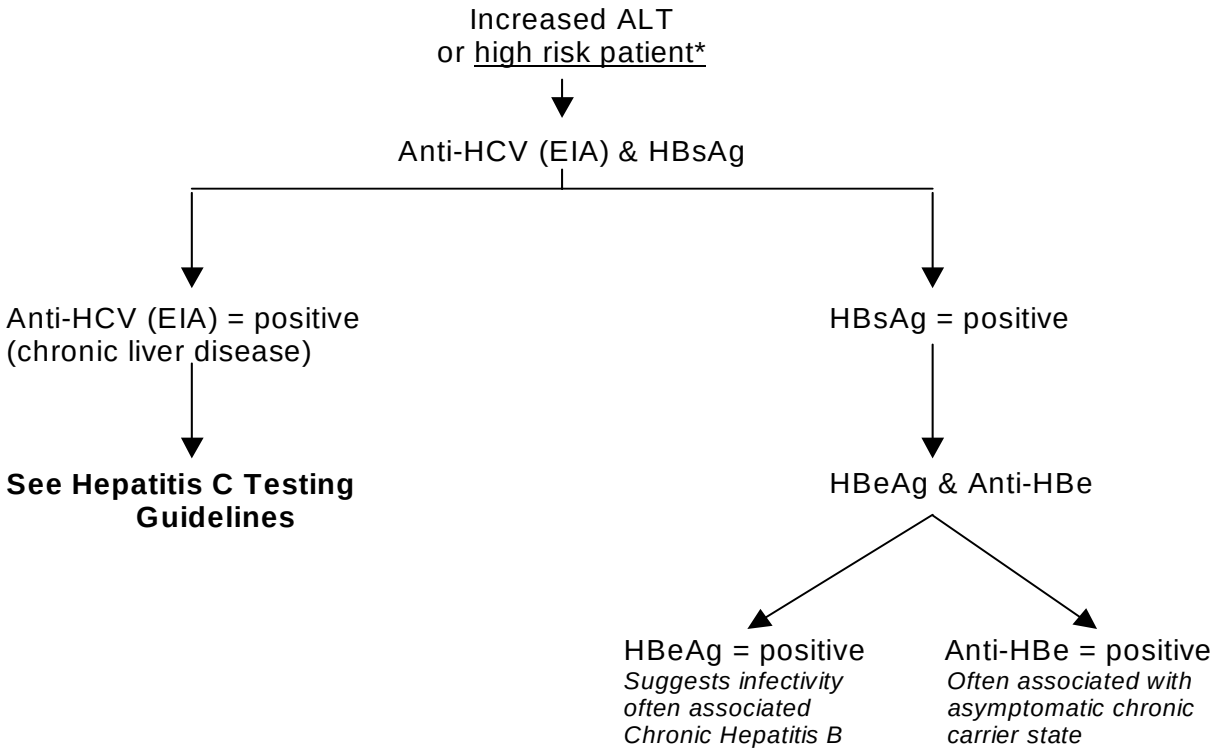
Neg → Very Early Acute Hepatitis B

Pos → Chronic Hepatitis B or chronic carrier state. (Possible tests to differentiate are HBV-DNA, Anti-HBe and HBeAg

Chronic Hepatitis Testing Guidelines

Washington State Clinical Laboratory Advisory Council
October, 2000

FOR EDUCATIONAL PURPOSES ONLY
The individual clinician is in the best position to determine which tests are most appropriate for a particular patient.



*High risk patient definition

1. Injection drug use
2. Nosocomial, occupational, or perinatal exposure
3. Select medical conditions (e.g., elevated ALT, dialysis, hemophilia)
4. Birth in endemic nation *(applies to Hepatitis B only)*
5. High risk sexual or STD history *(applies to Hepatitis B only)*
6. Blood products/organ transplants before 1992 *(applies to Hepatitis C only)*

References:

1. Lok, Anna and Gunaratnam, Naresh, Hepatology, Volume 26, No. 3, Suppl. 1, 1997
2. Leavelle, Dennis, MD, Mayo Medical Laboratories Interpretive Handbook, 1997
3. Abbott Laboratories, Abbott Diagnostics Educational Services, Hepatitis Learning Guide, 1998
4. Center for Disease Control Morbidity and Mortality Weekly Report, Recommendations of Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease, Vol. 47, No. RR-19, October 16, 1998
5. Specialty Laboratories, Hepatitis C Virus Genotype Technical Bulletin, HCVgeno, September, 1998
6. Mahoney, Francis J., Update on Diagnosis, Management, Prevention of Hepatitis B Virus Infection, Clinical Microbiiology Reviews, Vol. 12, No. 2, April, 1999

Reviewers:

1. Gretch, David, MD, PhD, Director of Hepatitis Division, University of Washington Viral Hepatitis Laboratory
2. Spitters, Christopher, MD/MPH, Medical Director, Infectious Disease and Reproductive Health, Washington State Department of Health

Pre- and Post-Vaccination Serologic Testing Guidelines for Hepatitis B

Washington State Clinical Laboratory Advisory Council
October, 2000

FOR EDUCATIONAL PURPOSES ONLY
The individual clinician is in the best position to determine which tests are most appropriate for a particular patient.

Pre-vaccination Testing

Anti-HBc total, total antibody (i.e., IgM and IgG) to the hepatitis B core antigen is an indicator of a current or previous HBV infection. It is also used with anti-HBs and HBsAg for screening at-risk populations for hepatitis B to determine their immune status. Individuals found to be positive for both anti-HBc and anti-HBs are presumed to be immune by prior natural infection. Those found to be negative are at risk for HBV infection and should be recommended for vaccination.

Post-vaccination Testing

The level of circulating anti-HBs is used to determine the effectiveness of vaccination. The hepatitis B vaccine is designed to induce only anti-HBs (the protective antibody) and will not induce an anti-HBc response. Outside the US, other levels of antibody may be used to determine immunity. These levels may vary from country to country.

The minimum protective level of anti-HBs is 10 IU/ml.

Post vaccination testing is advised only for:

1. Persons whose clinical management depends on knowledge of their immune status (e.g., infants born to HbsAg-positive mothers, dialysis patients, patients with HIV infection), and
2. Persons at occupational risk (dialysis and other health care workers).
3. Persons who are non-responders to the vaccine are usually candidates for revaccination (e.g., repeat 3-dose series) and post-vaccination retesting.

Also, older age, obesity, heavy smoking, and gluteal administration have been associated with lower antibody responses to vaccination.

Following vaccination, antibody titers may diminish over time, and may fall below the limits of detection by standard immuno-assays. However, there has not been documentation of clinical HBV infection or chronic infection among vaccinated adults who were exposed to HBV many years after primary vaccination. Thus, protective immunity may be life-long due to an anamnestic immune response to HBV, and currently the CDC does not recommend a late booster dose of HBV vaccine. Nevertheless, if a vaccinated person has a documented exposure to Hepatitis B, and titers are undetectable at the time of exposure, it is reasonable to offer HBIG and a booster dose of vaccine to the exposed individual.

In hemodialysis patients, it is recommended to test antibody levels annually and a booster dose given if the titer is <10 mIU/ml.

References:
1. Abbott Laboratories, Abbott Diagnostics Educational Services, Hepatitis Learning Guide, 1998
2. MMWR, Vol. 40/No. RR:13, November 22, 1991
3. Mandell, GL et al, eds. Principles and Practice of Infectious Diseases, 4th Edition, New York; Churchill Livingstone, p.1428
4. George, Sarah, M.D. and Stapleton, Jack T., M.D., The Status of Viral Hepatitis Vaccines, Clinical Microbiology Newsletter, Vol. 21, No. 14, July 15, 1999, p.113 – 118
5. CDC. Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States Through Universal Vaccination: Recommendations of the Immunization Practices Advisory Committee (ACIP). MMWR 1991;40(RR-13);1-19

Reviewer:
1. Spitters, Christopher, MD/MPH, Medical Director, Infectious Disease and Reproductive Health, Washington State Department of Health

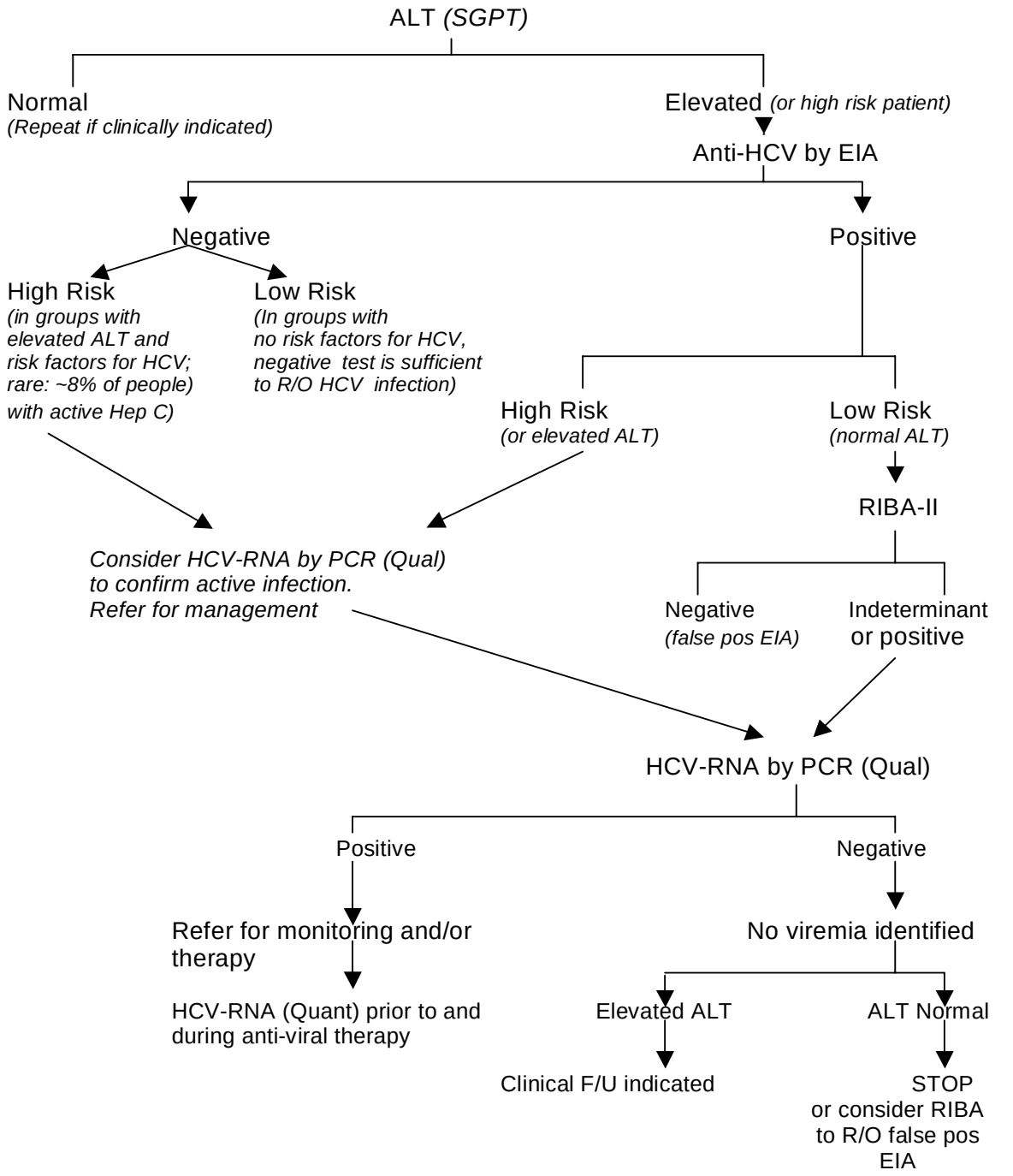
Hepatitis C Testing Guidelines

Washington State Clinical Laboratory Advisory Council
October, 2000

FOR EDUCATIONAL PURPOSES ONLY
The individual clinician is in the best position to determine which tests are most appropriate for a particular patient.

Screening

(See chart on screening recommendations for HCV infection on reverse side)



Hepatitis C Virus Genotyping: *The HCV genotyping assay can be used as a guide to duration of therapy and can affect a patient's long-term response to interferon (IFN-α).*

(Over for screening recommendations)

Screening Recommendations for Hepatitis C Virus (HCV) Infection

Persons who should be tested routinely for HCV infection based on their risk for infection:

- Persons who ever injected drugs, including those who injected once or a few times many years ago and do not consider themselves as drug users

- Persons with selected medical conditions, including:
  - persons who received clotting factor concentrates produced before 1987
  - persons who were ever on chronic (long-term) hemodialysis; and
  - persons with persistently abnormal ALT levels

- Prior recipients of transfusions or organ transplants, including:
  - persons who were notified that they received blood from a donor who later tested positive for HCV infection
  - Persons who received a transfusion of blood or blood components before July 1992, and
  - Persons who received an organ transplant before July, 1992

Persons who should be tested routinely for HCV infection based on a recognized exposure:

- Healthcare, emergency medical, and public safety workers after needle sticks, sharps or mucosal exposures to HCV-positive blood
- Children born to HCV-positive women

References:

1. National Institutes of Health Consensus Development Conference Panel Statement: Management of Hepatitis C, Hepatology September, 1997
2. Dula, William F. and Anderson, Steven M., Diagnosis and Monitoring of Hepatitis C Infection, Advance for Administrators of the Laboratory, June, 1998
3. Lok, Anna S.F. and Gunaratnam, Naresh T., Diagnosis of Hepatitis C, Hepatology, Vol. 26, No. 3, Suppl. 1, September, 1997
4. Everhart, James E., Stolar, Michael and Hoofnagle, Jay H. Management of Hepatitis C: A National Survey of Gastroenterologists and Hepatologists, Hepatology, September, 1997
5. Gretch, David R., Diagnostic Tests for Hepatitis C, Hepatology Vol. 26, No. 3, Suppl. 1, 1997
6. Cook, Linda, Hepatitis C Virus Diagnosis and Therapeutic Monitoring: Methods and Interpretation, Clinical Microbiology Newsletter, Vol.21, No. 9, May, 1999
7. Center for Disease Control Morbidity and Mortality Weekly Report, Recommendations of Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease, Vol. 47, No. RR-19, October 16, 1998
8. LabHorizons, Current Develpments in Clinical Diagnostics, Laboratory Corporation of America, c147-1197-1, 1997

Reviewers:

1. Gretch, David, MD PhD, Director of Hepatitis Division, University of Washington Viral Hepatitis Laboratory
2. Spitters, Christopher, MD/MPH, Medical Director, Infectious Disease and Reproductive Health, Washington State Department of health

Substantial Exposure Testing and Referral Guidelines

Washington State Clinical Laboratory Advisory Council
October, 2000

FOR EDUCATIONAL PURPOSES ONLY
The individual clinician is in the best position to determine which tests are most appropriate for a particular patient.

Exposure to Blood or Other Potentially Infectious Body Fluids

Is source patient known?

Yes

- Test source patient for HIV, HBsAg, anti-HCV and ALT *(SGPT)* unless already tested
- Counsel exposed person about risk of transmission
- Perform clinical evaluation of exposed person
- Test exposed person for anti-HBc, anti-HCV, and HIV
- Initiate or complete hepatitis B vaccine and HIV post exposure prophylaxis if indicated
- Provide counseling about risk of transmission

No

- Perform clinical evaluation of exposed person
- Test exposed person for anti-HBc, anti-HCV, ALT and HIV
- Initiate or complete hepatitis B vaccine and HIV post exposure prophylaxis if indicated
- Provide counseling about risk of transmission

HIV Protocol

Note: Refer to HIV Screening Guidelines for additional information

SOURCE	EXPOSED PERSON
HIV negative, source low risk	- HIV testing
	- No intervention
HIV positive, HIV negative but source high risk, or HIV status unobtainable	- Clinical evaluation
	- Consult CDC guidelines for prophylaxis
	- Test for HIV initially and again at 6 weeks, 3 months, 6 months, and 12 months

Hepatitis C Protocol

Note: Refer to Hepatitis C Management Guidelines for additional Information

SOURCE	EXPOSED PERSON
Low Risk	- No intervention
High risk or anti-HCV positive	- Test for anti-HCV and liver function (ALT) initially and at 3 and 6 months. May offer HCV by PCR testing at 4 weeks.

(Continued on back)

Hepatitis B Protocol

Note: Refer to Acute Hepatitis Testing Guidelines & Chronic Hepatitis Testing Guidelines for additional information

SOURCE	EXPOSED PERSON NOT PREVIOUSLY VACCINATED OR SERIES INCOMPLETE	EXPOSED PERSON PREVIOUSLY VACCINATED
HBsAg negative	- Test for anti-HBc or anti-HBs	- Test for anti-HBs
	- Initiate or complete hepatitis B vaccine series	- No intervention
HBsAg status unobtainable; source low risk	- Test for anti-HBc or anti-HBs	- *Known responder:* Test for anti-HBs
	- Initiate or complete hepatitis B vaccine series if susceptible (both negative)	- *Response unknown/non-responder*: Test for anti-HBs and anti-HBc. If anti-HBs is $\geq$ 10 IU/ml, no further treatment. If anti-HBs is < 10 IU/ml, give hepatitis B vaccine (HBV booster).*
HBsAg positive or HBsAg status unobtainable & source high risk	- Test for anti-HBc initially and at 6 months	*Known responder or response unknown:*
	- Test ALT levels initially and at 3 and 6 months	- Test for Anti-HBc initially and at 6 months
	- Give hepatitis B immunoglobulins (HBIG), 0.06 ml/kg, immediately	- Test for anti-HBs. If anti-HBs is $\geq$ 10 IU/ml, not further treatment. If anti-Hbs is < 10 IU/ml and person is responder (has been known to be positive in the past), give HBV booster and test ALT levels initially and at 3 and 6 months; test for anti-HBs in 6 months. If anti-HBs is < 10 IU/ml and person has not been determined to be positive in the past, give, HBV booster and 2 doses of HBIG 1 month apart. Test ALT levels initially and at 3 and 6 months; test for anti-HBs in 6 months.
	- Initiate or complete hepatitis B vaccine series. If exposed person refuses vaccine, give second dose of HBIG in 1 month	*Known non-responder:* HBIG x 2

* About 5% of people don't respond to the HBV; most are over age 50 or obese. 50% of non-responders to the first series of vaccine (3 doses) will respond to a second full series of 3 doses. If a positive anti-HBs can't be shown after 3 to 6 doses (1 to 2 series), the person is considered a non-responder and not protected.

References:
1. Garb, James R. MD, Director, Occupational Health and Safety, Baystate Health Systems, Managing Body Substance Exposures, Nursing, 1996
2. JAMA 1999; 281: 931-36 (March)
3. Nursing Clinics of North America 1999; 34:213
4. CDC. Recommendations for Prevention and Control of Hepatitis C virus (HCV) Infection and HCV-Related Chronic Disease. MMWR 1998;47(RR19);1-39
5. CDC. Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States Through Universal Childhood Vaccination: Recommendations of the ACIP. MMWR 1991;40(RR-13);21-25
6. CDC. Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and Recommendations for Post Exposure Prophylaxis. MMWR 1998;47 (RR-7);1-28

Reviewer:
1. Spitters, Christopher, MD/MPH, Medical Director, Infectious Disease and Reproductive Health, Washington State Department of Health

Laboratory Personnel Shortage, continued from page 1

The types of individuals that we are going to need to hire want portable credentials that will be honored by other employers and departments within the organization.

The current workforce situation: It is projected that with the continuation of a strong economy, workforce growth will climb at 1.1% while job growth will climb at 1.5% between 1996-2006 perpetuating the trend of tight labor markets and skilled worker shortages.

Supply: The workforce has reached its capacity for seeking full-time employment and workers who are currently part-time do not wish to work full-time. With a record number of the population working, employers will have to look at people currently not in the labor force such as welfare recipients, retirees, persons from outside the US, the disabled, and individuals changing careers.

Educational challenges:

- Cost, length, and location of training
- Relevance of training to marketplace
- Curriculum deficiencies
- Team care
- Leadership in the marketplace

Forces driving educational change:

- Increasing pressure to make basic science curriculum more relevant
- Greater integration of basic science instruction across discipline lines
- Decrease the length and cost of professional education
- Insure a smooth transition for students into the profession
- Curriculum mix (quantity, cost, and quality) is mismatched with customer's requirements
- Cost of education has shifted away from general state revenue towards the students themselves
- Employers want an active role in defining educational needs/requirements

Solutions:

- Enhance cross-training
- Curriculum redesign and restructuring on a short timeline
- Greater input from the community into curriculum and programs
- Core courses for all health professions
- Multidisciplinary interschool teaching and training
- Reduce the time and cost of education
- Use information systems, distance learning, and community-based education and training
- Changes in faculty, staff and student roles

Reasons for the decline in applicants for CLS/CLT programs:

- Potential applicants lack an understanding of the career
- Feel the program is too difficult
- No clear pathway for advancement/promotion
- Lack of recognition – an image problem
- Not valued for their role in health care
- Profession is viewed as dangerous
- Work environment is stressful
- Have more and better paying career opportunities

Recruitment: Fundamental and sustainable changes are needed if current and future staffing issues are to be managed successfully.

- Sign-on bonuses with relocation expenses paid
- Loan repayment or loan forgiveness programs for hard-to-hire positions
- Address the issue of co-payment for the costs of health insurance (often too high to recruit individuals into low-wage positions)
- Partner with other professions having similar problems on broad-based marketing campaign
- Promote work ethics and soft skill training in middle, junior, and high schools
- Provide assistance in making connections with area schools (we need to marry our community colleges with our universities so that students can go right into the university without loss of credits)
- Encourage and provide distance-learning opportunities
- Identify nationally where there is a surplus of health care professionals versus jobs
- Provide health care work force data including supply and demand, turnover rates, salary comparison
- Highlight how other members and other industries are using technology in new ways
- Development of "Foundation Grants" for student tuition scholarships

Why people are leaving the profession:

- High stress
- Not valued personally or professionally
- Pay not commensurate with responsibility and education
- Limited opportunity for career advancement
- Hostile work environment (constant requirement to do more with less)
- Inadequate staffing ratios

continued on page 12

Personnel Shortage, cont'd from page 11

Keeping Existing Staff

- Employers are spending more on recruitment advertising, supplemental staffing agencies, sign-on bonuses, stay-put bonuses, and quality improvement designed to attract health care professionals based on a better work environment.
- Ultimately, it is the work environment that determines whether staff stay. Salary is important and so are benefits, but they usually are not the final decision maker.

What else can we do?

- Promote partnerships between and among hospitals, health systems, and schools to help make health care a logical career choice – offer classes in hospitals whenever possible
- Establish collaborative relationship with the state hospital association and work with neighboring states to address work force issues regionally
- Partner with experts to pursue the recruitment of experienced and prepared CLS and CLTs from other countries.
- Convene a committee of hospital CEOs, education program deans, and other key leaders in the community to address work force issues.

Calendar of Events

PHL Training Classes:

Basic Course in Parasitology

Part II: The Protozoans
February 6 & 7 Shoreline

Part III: Reading Trichromes
April 3 & 4 Shoreline

WSSCLS/NWSSAMT Spring Meeting
April 19-21 Spokane

Northwest Medical Laboratory Symposium
October 10 - 13 Portland

8th Annual Clinical Laboratory Conference
November Seattle

Contact information for the events listed above can be found on page 2. The Calendar of Events is a list of upcoming conferences, deadlines, and other dates of interest to the clinical laboratory community. If you have events that you would like to have included, please mail them to ELABORATIONS at the address on page 2. Information must be received at least one month before the scheduled event. The editor reserves the right to make final decisions on inclusion.

ELABORATIONS

Washington State Department of Health
1610 NE 150th Street
Shoreline, WA 98155